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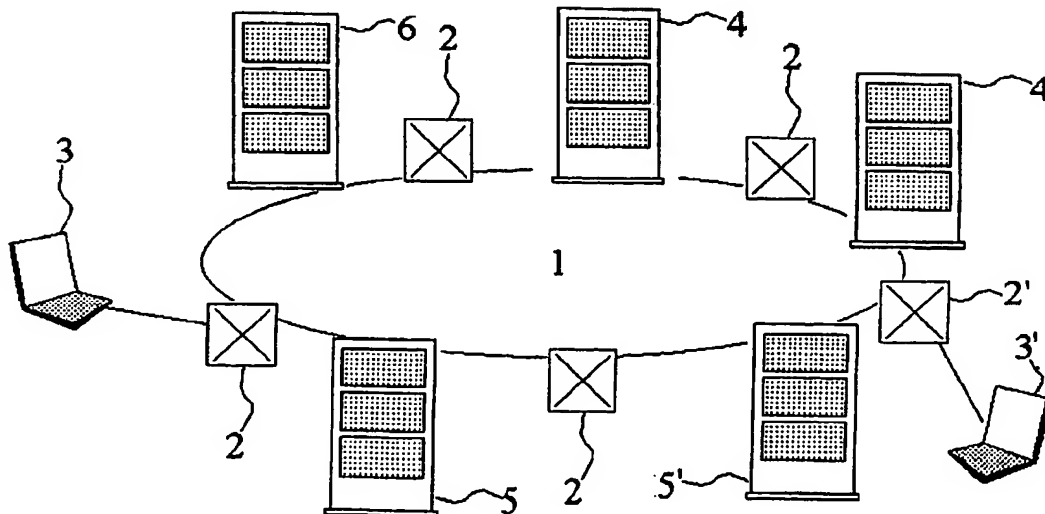
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(54) Title: **NETWORK WITH CACHE SERVERS**



(57) Abstract: Network (1) comprising local network nodes (2, 2'), via which local users (3, 3') have access to the network and local servers (5, 5'), for example cache servers. Permanent connection of a user to one specific local server has the disadvantage that if a user logs in at a different location, another local server may be able to offer much better performance and greater savings in network traffic. For this reason, the present network comprises means (2, 2', 6) for determining the geographic location of the user (3, 3') and on the basis of his location for connecting the user to the most appropriate local server (5, 5') in respect of his location.

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Network with cache servers**BACKGROUND OF THE INVENTION**

5 The invention relates to a network comprising local network nodes, via which local users have access to the network, and also local servers.

It is known that the demand for bandwidth often exceeds the deliverable capacity in the current networks. The demand
10 for bandwidth will increase rapidly, particularly with the roll-out of broadband access (for example via xDSL). One method of reducing the volume of network traffic and/or improving performance (response time!) is placing content on local (cache) servers in the network so that data

15 (whether or not copies of the content (data) from the non-local servers) from these local servers can be involved.

According to prior art, each user is permanently allocated to one specific local server.

Such a permanent connection has the following
20 disadvantages: if a user logs in at a different location, it is possible that another local server may be able to offer much better performance and greater savings in network traffic.

25 **SUMMARY OF THE INVENTION**

The aim of the invention is to obviate the aforementioned drawbacks. To this end, the network in accordance with the invention comprises means for determining the geographic
30 location of the user and on the basis of his location to connect the user to the most appropriate local server in respect of his location. The present invention is also suitable for 'roaming' users.

The network address of a user can be used to determine the
35 geographical location of a user. The ATM address of the

user is used in an ATM network and the IP address of the user in an IP network (IP version 6 addresses in particular can be used as unique addresses).

5 DESCRIPTION OF THE DRAWING

The functioning of the present invention is explained in more detail below with reference to figure 1. Figure 1 shows an ATM-based network 1 that is accessed via nodes (switches) 2 (resp. 2'). The network 1 comprises non-local servers 4 and local cache servers 5 (resp. 5') that contain - regularly updated - copies of the data (content) stored on the non-local servers 4. However, the local servers may also contain content that does not originate from the non-local servers 4. The network furthermore comprises an authentication server 6.

A user 3 connects to the node 2 and is allocated an address (prefix) by this node. Once the node 2 has connected to the authentication server 6, the user 3 is authenticated by the authentication server. The authentication server 6 then determines the geographical location of the user based on his ATM address. The node 2 then connects the user 3 to the most appropriate (nearest) local server 5 under the control of the authentication server 6.

When the user seeks access to the network 2 (the user is now indicated by 3' in the figure) via a different node, node 2', the same procedure occurs as above: user 3' connects to node 2' and is allocated an address. Once node 2' has connected to the authentication server 6, the user is authenticated. The authentication server 6 then determines the (new) geographical location of the user based on his ATM address. Node 2' then connects the user 3' to the most appropriate (nearest) local server 5' under the supervision of the authentication server 6.

CLAIMS

1. Network (1) comprising local network nodes (2,2'), via
which local users (3, 3') have access to the network,
and also local servers (5,5'), characterised by means
5 (2,2',6) for determining the geographical location of
the user (3,3') and on the basis of his location
connecting the user to the most appropriate local server
(5,5') in respect of his location.
2. Network according to claim 1, characterised in that the
10 means (2,2',6) for determining the geographical location
of the user (3,3') detect the network address of said
user.
3. Network according to claim 2, characterised in that the
15 user (3,3') connects to the node (2,2') and is allocated
a network address by this node, after which the node
connects to an authentication server (6) that
authenticates the user and determines his geographical
location on the basis of his network address, after
which the user is connected to the most appropriate
20 local server (5,5').

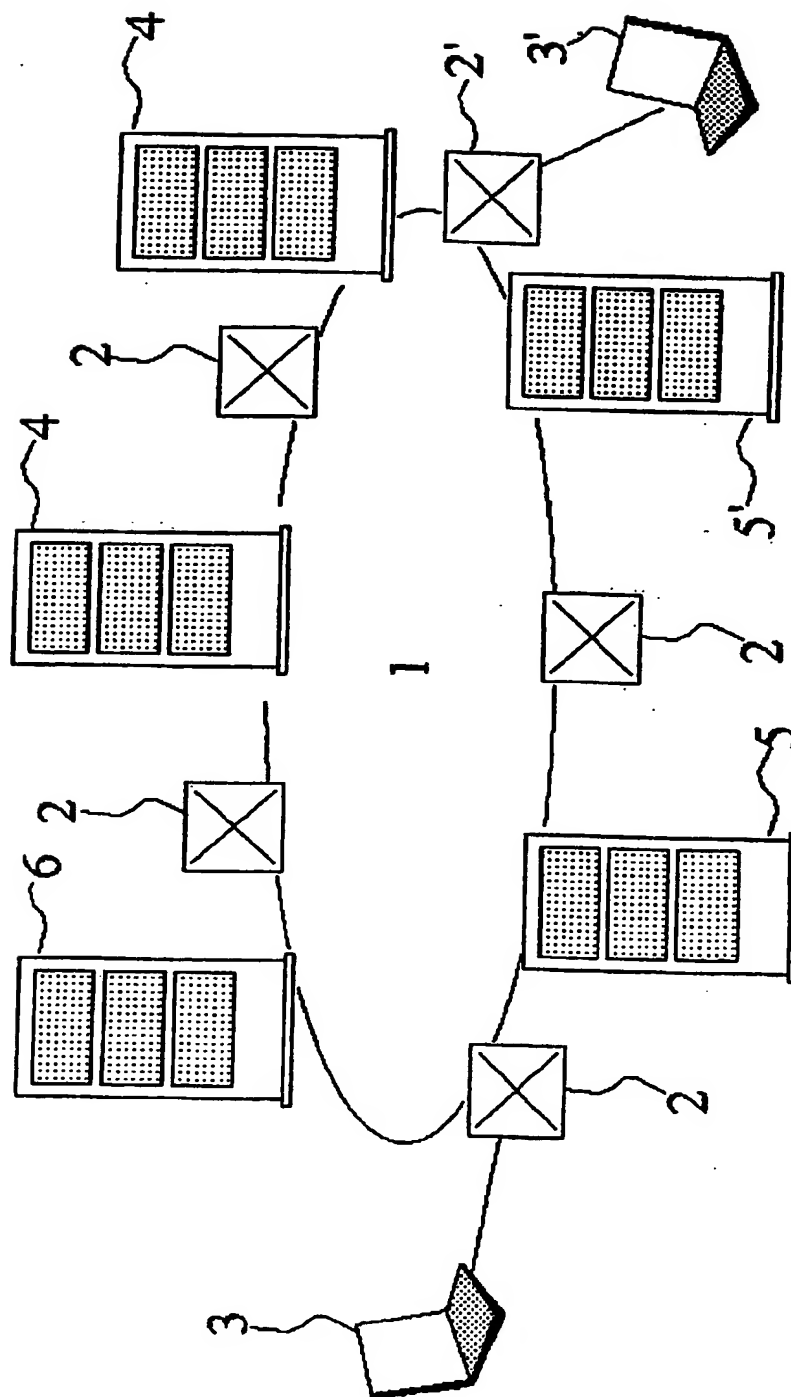


FIG. 1